

## Patent Abstracts of Japan

PUBLICATION NUMBER : 03016930  
 PUBLICATION DATE : 24-01-91

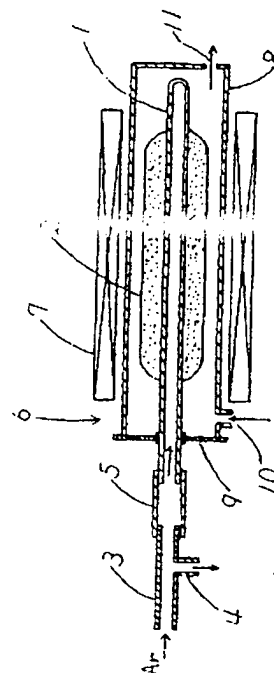
APPLICATION DATE : 13-06-89  
 APPLICATION NUMBER : 01148503

APPLICANT : FUJIKURA LTD;

INVENTOR : YAMAUCHI RYOZO;

INT.CL. : C03B 37/018 C03B 37/012 G02B 6/00  
 G02B 6/10

TITLE : PRODUCTION OF OPTICAL FIBER  
 HAVING COMPLICATE REFRACTIVE  
 INDEX DISTRIBUTION



ABSTRACT : PURPOSE: To surely produce a preform having high dimensional accuracy and giving an optical fiber having a complicate refractive index distribution with excellent dispersion characteristics. etc., by using an outside axial deposition process and rod-in-tube process and forming only the outermost layer by the outer deposition process.

CONSTITUTION: A glass soot layer 2 having a refractive index lower than that of a high purity quartz glass tube 1 is deposited on the outer circumference of the glass tube 1 by outside axial deposition process. An end of the glass tube 1 is closed, a gas-feeding pipe 3 is connected to the other end via a connector and the tube is introduced into a uniform-heating furnace 6. The glass tube is heated while applying inner pressure to the tube with an inert gas supplied through the gas-feeding pipe 3 to convert the glass soot layer 2 into a transparent glass layer. A transparent quartz glass rod having a core clad structure is inserted into the glass tube 1 and the components are melted and integrated by rod-in-tube process. The objective optical fiber having complicate refractive index distribution can be formed by drawing the preform produced by the above procedures.

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